

Eutamias merriami merriami (Allen)
Eutamias merriami mariposæ Grinnell
Eutamias merriami pricei (Allen)
Eutamias merriami kernensis Storer & Grinnell
Eutamias merriami obscurus (Allen)
Eutamias merriami meridionalis Nelson & Goldman
Eutamias dorsalis dorsalis (Baird)
Eutamias canescens Allen
Eutamias dorsalis utahensis Merriam

Biological Survey, Washington, D. C.

GENERAL NOTES

HOARY BAT IN VERMONT

A live male specimen of the hoary bat (*Nycteris cinerea*) was picked up on the sidewalk at Woodstock, Vermont, June 20, 1921, and was presented to the writer for his private collection. This bat seems to be rare in Vermont in the breeding season although it must occur here during migrations. The only other specimen recorded as captured within the state was taken at Colchester, on Lake Champlain, October 12, 1842, and is now in the State museum at Montpelier. The writer and friends have watched for the hoary bat many evenings along mountain streams and lakes without success. On October 29, 1921, a large bat was seen flying over the marshes on a mountain lake in Wallingford, altitude 2300 feet. It was not shot as it would have been lost in the swale. The temperature had been below freezing on several occasions, and there was ice in some places when this bat was seen. The writer judged that none but a hoary bat would have showed the hardihood to be abroad at such a time.—GEORGE L. KIRK, *Rutland, Vt.*

AN INSTANCE OF UNPROVOKED ATTACK BY A BROWN BEAR

On August 25, 1921, I killed a moose while hunting on the headwaters of Sidney Creek, a tributary of the Nisutlin River, in Yukon Territory, Canada, and after butchering the same, returned to camp late in the evening.

The following morning Mr. W. E. Rumble, his son Willard Rumble and myself, taking two dogs with us, left for the scene of the kill with the intention of bringing in the meat for camp use. The moose was killed in a fairly dense thicket of willows and upon nearing the spot where the carcass was located I pushed on ahead of my companions, who were followed by the two dogs, until I was perhaps fifty or sixty feet ahead of them, entering the thicket by way of a narrow game trail. I had progressed only a short distance into the thicket when I heard a crashing in the underbrush, followed by an exclamation from one of my companions, and upon looking back, beheld a medium size brown bear charging directly toward them along the edge of the thicket. Mr. Rumble was armed with a Winchester repeating rifle, but before he could throw a load into the chamber and shoot, the dogs had rushed out at the bear and he then withheld

his fire for fear of hitting one of them. The charge of the bear had brought it to within ten feet of the Rumbles when diverted by the dogs, one of which it chased into the brush and then turned and repeated the performance with the second dog. When the bear stopped this time it was standing broadside to me just at the entrance of the game trail in which I was standing and about twenty feet distant from me. I was armed with a 7 mm. Mauser rifle and when I first saw the bear, I had, as I supposed, thrown a cartridge from the magazine into the chamber, but evidently had failed to bring the bolt back far enough to engage the shell and consequently the rifle was unloaded. Up to this point I do not think that the bear had seen me, but when my rifle snapped it turned and charged upon me, covering the intervening distance in two jumps, the first of which brought it to within six or eight feet of the spot upon which I was standing. Loading as hastily as possible, I fired and dropped to the ground, at the same time throwing up my arms to protect my face from injury. The bear had sprung at me before I fired and when I dropped, the momentum of the leap carried it clear over me, but it struck at me as I was falling and tore quite a large gash in my left forearm with one claw. By this time the dogs had recovered their morale and chased the bear into a thick clump of brush where they bayed it. My shot had evidently wounded the animal quite severely for it had spilled a large quantity of blood where it struck the ground just over my head. We immediately followed to the place where the bear had stopped and after a short time shot it in the head, but not until after it had caught one of the dogs, which had ventured too close, and given it a severe mauling. Subsequent examination showed that my first shot had penetrated the animal's heart, and although it apparently had made it quite sick, it was fully two or three minutes before it was finally dispatched by a head shot. The bear was a female weighing about six hundred pounds.

Upon going to the spot where the moose carcass had been left we discovered that the bear, after sampling each of the quarters, had dragged them together and covered the lot with dirt and moss. We returned shortly to camp, a distance of eight or nine miles, but were prevented from immediately revisiting the scene of the encounter by a spell of rainy weather that lasted five days. The bear evidently had a young one with her, for upon returning to the place after the weather had moderated, we could observe evidence that a cub had tried to suckle her.

I wish to emphasize the fact that this attack was entirely unprovoked. When the bear attacked us we were at least fifty yards from the moose carcass and, owing to the thick growth of brush intervening, were not visible from that spot. The dogs were behind Mr. Rumble and his son until the bear had almost reached them and could not possibly have provoked the attack.—A. C. BONEBRAKE, *Goldendale, Wash.*

A COYOTE IN MARYLAND

On February 5, 1921, an adult male coyote was shot 5 miles northwest of Poolesville, Montgomery County, Maryland, by Mr. John A. Jones. The animal had been seen by several people in the region at various times since early in the winter, but it had successfully evaded guns. Its chances of living were lessened,

however, when it became friendly with a female Airedale dog, lost some of its wariness, and frequently came near the farm buildings where the dog lived. It was killed with a shot gun in a field on the farm.

Mr. Jones has generously deposited the skin and skull in the Biological Survey collection, United States National Museum, where the specimen becomes number 235,503. It may be tentatively referred to *Canis latrans latrans*, but with our present confused knowledge of the taxonomic relations of the coyotes exact identification of individual specimens is almost impossible. The animal was adult, but not old, the teeth showing only a trace of wear. It differs in no pronounced color or cranial characteristics from a male specimen collected in May, 1910, at Rockford, Iowa, which may be considered typical *latrans*.

The question naturally arises as to how a coyote reached this eastern locality. It is, of course, impossible to say definitely. The animal probably escaped from captivity. Or it may represent an extreme easterly extension of the geographic range of coyotes. There is no direct evidence for or against either of the suppositions. It is known that the range of the coyote has gradually extended northward and eastward, but it would seem hardly probable that the species has, as yet, ingressed a region as far east as central Maryland.—HARTLEY H. T. JACKSON, *U. S. Biological Survey, Washington, D. C.*

AN OBSERVATION ON THE CARNIVOROUS PROPENSITIES OF THE GRAY GOPHER

While on a camping trip in northern Minnesota during August I chanced to make an interesting observation on the preying habits of the gray gopher, *Citellus franklini* (Sabine). On this particular occasion our party had stopped for lunch in a vacant yard in the forest of western Aitkin County. Suddenly we heard sharp squeals coming from the edge of a copse and looking in that direction we noticed what appeared to be a struggle going on in the grass. Hurrying to the spot we discovered a nearly full-grown gray gopher struggling with a young rabbit which it had seized behind the right ear. The gopher hesitated a moment on our approach, but did not release its grip until I stepped to within a pace of it, when it darted off a distance of two or three feet. The rabbit, I observed, was alive but unable to move. It was fully as large as the gopher. We stood still and the gopher returned to the attack, biting the rabbit furiously about the body. Again I frightened the gopher away but it returned once more to the attack and repeated its previous performance. I frightened it away a third time, but again it returned and rushed upon the prey biting it here and there about the body until it was apparently dead. Then running its nose rapidly over the carcass the gopher began gnawing at the hind quarters.

We left the scene and about twenty minutes later I returned to the spot and found the gopher still gnawing at the carcass, the hind quarters of which, except for skin and bones, had been devoured. Examining the spot where the struggle was first seen I found a small "form," in which the rabbit had apparently been lying when it was pounced upon. A week or so previous to this occasion, at Gull Lake in Crow Wing County, I watched an individual of this same species making after a striped gopher, which, however, escaped into a brush-pile.—ARTHUR M. JOHNSON, *Department of Botany, University of Minnesota.*

THE YOUNG OF THE CALIFORNIA GRAY SQUIRREL

The large arboreal nests of the California gray squirrel (*Sciurus griseus griseus* Ord) are not uncommon in the Transition Zone forests of California but the finding of young in one of these nests is a rather unusual event. In fact, I have not been able to find any published account of the young of this species except general statements relative to the number to a litter and approximate season at which they are dropped.

On April 13, 1919, while in the hills near Lake Lagunitas, Marin County, California, I examined a number of arboreal nests of mammals. Some of these were the work of the brown-footed woodrat, but the majority of those investigated had been made by gray squirrels as attested by their smaller and more rounded form, more compact structure, and greater height above the ground. In the Sierra Nevada nests of the gray squirrel are more often placed in conifers, but in the coast redwood belt the animals use the live oak, California laurel, and madrone. The nest discussed here was about 40 feet above the ground in a live oak, just within the crown of green leaves at the top of the tree. It came to attention only when the tree was examined from directly beneath. The nest tree was in a grove of live oaks on a slight rise of ground between two rather level small valleys.

This nest was about 50 centimeters in outside diameter. The form of the base of the nest suggested that it might originally have been constructed by a western crow, a bird which is common in many parts of Marin County. There were portions of several flight feathers of a crow in the nest but these could well have been picked up on the ground by the parent squirrel when gathering material for the nest lining. The central soft portion of the nest was about 25 centimeters in diameter. At the bottom it was made up of shredded oak bark prepared by the parent squirrel in the manner common to many rodents, and much of this material was in very short lengths. Above this was a soft mass of gray lichen, chiefly *Usnea florida* but with some *Evernia prunastri* and a slight amount of a moss, *Alsia longipes*. Over the moss and lichen were some live oak twigs cut green to which the leaves were still adhering. In the central soft part of the nest were the two young squirrels where they could easily keep warm while the female was away.

The young squirrels were packed in an "egg" box and taken to Berkeley where they were kept alive for a few days, being sheltered in a box lined with cotton. They were fed on "Carnation" condensed milk, diluted with three parts of water. This diet was obviously unsuitable as it caused a violent digestive disturbance, more or less constipation, followed by a profuse diarrhea, and so weakened the young that they had to be killed and preserved as specimens. Upon autopsy of one of the squirrels the caecum was found to contain much caseated milk and to be bloated with gas. Possibly cow's milk would have been more suitable. Instances have been reported where a cat whose young have been removed has acted as foster parent for young squirrels. Great difficulty was experienced in keeping the young squirrels sufficiently warm.

When the nest was first opened a finger thrust at the young squirrels was eagerly seized and sucked—an obvious feeding reflex. Later, in captivity, whenever they were touched, their forefeet would work around and eagerly

grasp a person's hand. On the evening of capture, warm diluted "Carnation" milk was offered in a glass medicine dropper. Little was taken then, but the next day they fed five times, and at one feeding each took about 10 cubic centimeters of the milk. The following day they were fed four times at intervals of approximately four hours, taking about the same amount at each feeding. Similar feeding was carried on for two days more but by the fifth day they showed little desire to feed, and their weakened condition caused abandonment of further attempts to keep them alive. Often a finger wet with milk would be seized and sucked on eagerly until all the milk had been drawn in. The tongue was held in a broad U-shape when sucking.

When feeding, the young pushed outwardly with their fore feet, and they suckled the medicine dropper contentedly only when their feet found a surface against which they could press. Presumably when feeding normally they massage the mammary glands of the female as do the young of domesticated animals. They squirmed a good deal while feeding but more than once upon having their hunger satisfied they fell asleep before being put away. Between feedings the young spent practically all of their time asleep. When first taken they twitched and twisted while asleep but this was less evident as they grew larger. When asleep they curled up with the nose toward the lower part of the abdomen and often with one hind leg thrown over the head. The young uttered low squealing sounds when taken from the nest and later, in captivity, especially if they became cold.

When first seen the skin of the young squirrels was loose and wrinkled. Three days afterward their bodies had filled out so that this condition had entirely disappeared. The hair, which at first was but a slight growth on the dorsal surface, had in the same period of time grown rapidly, and the white lateral fringing of the tail began to show. A brown spot appeared at the inner base of each ear and the black ended overhairs on the dorsum showed conspicuously. But there was only a very slight growth of hair on the belly during this time. The whole appearance of the young was substantially changed during this interval. When found, the disproportionate size of the head and feet suggested the young of a carnivorous mammal. This changed to a typical squirrel appearance within three days.

At no time were the eyes open, although to judge from their growth in captivity the squirrels must have been more than a week old when found. Forty-eight hours after being collected the male weighed 74.6 grams and measured (approximately) $205 \times 93 \times 34 \times 8$ millimeters. Three days later he measured $220 \times 100 \times 35 \times 8$. The female weighed and measured at the same time, was 80.4 grams and measured $225 \times 95 \times 37 \times 8$. Similarly, when prepared as a specimen, she measured $240 \times 102 \times 40 \times -$. Weights were not taken subsequently as the animals were much reduced by their enteritis and weights then would not have been significant.—TRACY I. STORER, *Museum of Vertebrate Zoology, University of California, Berkeley, Calif.*